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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,881	10/29/2003	Arto Palin	4208-4158 (Nokia 28980)	4109

27123 7590 05/15/2006  
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EXAMINER

ABRAHAM, ESAW T

ART UNIT PAPER NUMBER

2133

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/694,881

Applicant(s)

PALIN ET AL.

Examiner

Esaw T. Abraham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.9.10/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims **1-37** are presented for examination.

#### ***Information Disclosure Statement***

2. The references listed in the information disclosure statement submitted on 03, 09, 10/05 have been considered by the examiner (see attached PTO-1449).

#### ***Specification***

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### **Claim objections**

4. Claims **34, and 36** are objected to because:

The claims (claims 34 and 36) recite, the phrase "adapted to" since "**adapted to**" only suggests or makes optional and fails to further limit the claim.

The examiner's suggestion is to replace the phrase "adapted to" to ---configure to---.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to

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a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere CO.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims **1-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Overy et al. (U.S. PN: 6,961,541) (hereinafter "Overy") in view of Sharma et al. (U.S. PN: 6,799,287),

**As per claims 1, 22 and 23:**

Overy substantially discloses a method and system for providing enhanced loop security by measuring a distance between transceivers (see line 1, lines 32-35). The method is embodied in an apparatus that establishes a wireless connection between an initiating device and a responding device by computing a distance or location of the responding device in conformity with a channel time delay between the responding device and one or more receivers. At least one of the receivers may be located within the initiating device or one or more of the receivers may be external to the initiating device. If the computed location indicates that the responding device is a desired device, a secure connection is then established between the initiating device and the responding device (see col. 3, lines 27-40). Further, Overy teaches a security within a wireless network such as WPAN network (e.g., as BLUETOOTH) network (a second

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short-range communication link), by adding a device location criterion to the network security model and alternatively a separate infrastructure (a first short-range communication link) added for providing device location information and the location information used to provide the additional security information and ULTRA Wideband (UWB) technologies as proposed by the UWB working group includes precision measurement of pulse arrivals, providing direct distance measurement information (or location information using multiple receivers) to provide verification of physical location of a connecting device (see col. 3, lines 63-67 and col. 4, lines 1-19). Overy **does not explicitly** detail the aspects of “transmitting and converting the protected content stream (packet and injected or inserted errors) into the data stream. **However**, Sharma et al. teach an error injection module is used to inject random errors into an ECC circuit between an encoder and a decoder. The encoder encodes data bits with check bits to produce an encoded signal and a decoder decodes (convert) the encoded signal, after modification by the error injection module (see col. 2, lines 34-50 and figure 3B). **Therefore**, it would have been obvious to a person having an ordinary skill in the art at the time the invention was made to implement or incorporated the method of converting or decoding encoded data (injected errors) as taught by Sharma et al. into the invention of Overy. **This modification** would have been obvious because a person having ordinary skill in the art would have been motivated in order to enhance security and link or channel performance.

**As per claim 2-6:**

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The limitation of these claims have been noted in the rejected of claim 1 including Sharma et al. teach an error injector coupled to and injecting an error signal into the encoded signal whereby the error injecting module produce and output signal comprising one of a no error condition, a single error condition and multiple error condition (see claim 1).

**As per claim 7:**

The claim is at least rejected for their dependencies, directly or indirectly, on the rejected claim 1 above. It is therefore rejected as set forth above.

**As per claim 8:**

The limitation of this claim has been noted in the rejected of claim 1 including Sharma et al. teach an error correcting code (ECC) circuits used in semiconductor memory designs to correct single-bit errors and to detect double-bit errors (see col. 3, lines 7-23).

**As per claims 9-11:**

The limitation of this claim has been noted in the rejected of claim 1 including Sharma et al. teach that the ECC circuits perform their error checking functions by generating a number of check bits for a specific number of data bits, and then writing the check bits to memory with the data bits (see col. 3, lines 44-56).

**As per claims 12-13:**

The claims are at least rejected for their dependencies, directly or indirectly, on the rejected claim 1 above. It is therefore rejected as set forth above.

**As per claims 14-17:**

Most of the limitations of these claims have been noted in the rejection of claim 1. In addition Sharma et al. teach an error injection module is used to inject random errors into an ECC circuit between an encoder and a decoder. The encoder encodes data bits with check bits to produce an encoded signal and a decoder decodes (convert) the encoded signal, after modification by the error injection module (see col. 2, lines 34-50 and figure 3B).

**As per claims 18-19:**

The limitation of this claim has been noted in the rejected of claim 1 including Sharma et al. teach that in the BLUETOOTH network security model, a combination key mechanism is used that generates an encryption/decryption key from stored passkeys within a pair of devices. When the devices are "paired" (e.g., connected during network setup), if a rouge device is present during pairing, the combination key for access to the devices or link establishment can be acquired (see col. 2 lines 59-67).

**As per claims 20-21:**

The claims are at least rejected for their dependencies, directly or indirectly, on the rejected claim 1 above. It is therefore rejected as set forth above.

**As per claim 24-29:**

The limitation of this claim has been noted in the rejected of claim 23 including Sharma et al. teach the error injection circuit (120) then injects single errors, one for each of the 72 bits and the output signals from the decoder (135) are provided to the monitoring module 140, which determines if the provided output signals match the expected output signals (see col. 4, lines 54-63).

**As per claims 30-32:**

The limitation of these claims have been noted in the rejected of claim 23 including Sharma et al. teach that in the BLUETOOTH network security model, a combination key mechanism is used that generates an encryption/decryption key from stored passkeys within a pair of devices. When the devices are "paired" (e.g., connected during network setup), if a rouge device is present during pairing, the combination key for access to the devices or link establishment can be acquired (see col. 2 lines 59-67).

**As per claims 33-37:**

Overy substantially discloses a method and system for providing enhanced loop security by measuring a distance between transceivers (see line 1, lines 32-35) whereby the method is embodied in an apparatus that establishes a wireless connection between an initiating device and a responding device by computing a distance or location of the responding device in conformity with a channel time delay between the responding device and one or more receivers. At least one of the receivers may be located within the initiating device or one or more of the receivers may be external to the initiating device. If the computed location indicates that the responding device is a desired device, a secure connection is then established between the initiating device and the responding device (see col. 3, lines 27-40). Further, Overy teaches a security within a wireless network such as WPAN network (e.g., as BLUETOOTH) network (a second short-range communication link); by adding a device location criterion to the network security model and alternatively a separate infrastructure (a first short-range



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communication link) added for providing device location information and the location information used to provide the additional security information and ULTRA Wideband (UWB) technologies as proposed by the UWB working group includes precision measurement of pulse arrivals, providing direct distance measurement information (or location information using multiple receivers) to provide verification of physical location of a connecting device (see col. 3, lines 63-67 and col. 4, lines 1-19). Furthermore, Overy in figure 3 disclosed a pair of transceivers and each of the transceivers 21A and 21B include a transmitter 24A, 24B a receiver 25A, 25B an antenna 22A, 22B and a processor 26A and 26B, processors 26A and 26B include necessary memory such as RAM or ROM for storing program instructions and data for execution on a microcontroller, microprocessor or a general purpose computer system for implementing methods in accordance with embodiments of the present invention (see col. 6, lines 19-67). Overy does not explicitly detail the aspects of "transmitting and converting the protected content stream (packet and injected or inserted errors) into the data stream. **However**, Sharma et al. teach an error injection module is used to inject random errors into an ECC circuit between an encoder and a decoder. The encoder encodes data bits with check bits to produce an encoded signal and a decoder decodes (convert) the encoded signal, after modification by the error injection module (see col. 2, lines 34-50 and figure 3B). **Therefore**, it would have been obvious to a person having an ordinary skill in the art at the time the invention was made to implement or incorporated the method of converting or decoding encoded data (injected errors) as taught by Sharma et al. into the invention of Overy. **This modification** would have been

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obvious because a person having ordinary skill in the art would have been motivated in order to enhance security and link or channel performance.

### **Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US PN: 6,144,464          Rupp et al.

US PN: 6,539,503          Walker Shawn Kenneth

US PN: 6,571,212          Dent, Paul W

7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for after final communications.

Information regarding the status of an Application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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*Esaw Abraham*  
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**GUY LAMARRE**  
**PRIMARY EXAMINER**